

CLAIMS

1. Machine for orienting, straightening and aligning plastic vessels or bottles, of the type comprising a hopper for randomly loading the vessels or bottles that are composed of a cylindrical rotating wall (1) carrying on its external face a plurality of cradles (5) with
5 below-placed discharging channels (8) and a carousel (7) carrying a plurality of separators (9) composing vertical channels or openings (10), characterised in that it comprises a mechanical speed gear (50) for changing the ratio of the number of revolutions of the carousel (7) with respect to the number of revolutions of the cylindrical rotating wall 1.

2. Machine according to claim 1, characterised in that the mechanical speed gear (50)
10 comprises: two idle toothed wheels (21) and (22) on a first motored shaft (12) that rotates the cylindrical wall (1); a grooved wheel (23) placed between said two toothed wheels (21) and (22) that is keyed-in onto said shaft (12) that is able to vertically translate, on the face of said grooved wheels stakes (31) being provided that are adapted to be inserted into suitable seats (32) of the toothed wheels in order to drive one or the other of said toothed
15 wheels (21) and (22) that are connected through chains (40) and (41) respectively to toothed wheels (38) and (39) keyed-in onto a second shaft (35) that rotates the carousel (7).

3. Machine according to claim 1, characterised in that it comprises a pneumatic cylinder (30) that operates on a fork (26) carrying two small rollers (24) that engage a groove (23a) of the grooved wheel (23).

20 4. Machine according to claim 1, characterised in that it comprises a phase changer (37) inserted onto the second shaft (35) to change the angular position between said first shaft (12) and said second shaft (35).